

Serial No. 10/736,922
60246-223; 10692**REMARKS**

Applicant wishes to thank the Examiner for the detailed remarks. Claims 1, 20, 33, 34, 41 and 42 have been amended. Claims 15, 16, and 19 have been cancelled, and new claims 45-47 are presented. Accordingly, claims 1-14, 17, 18, and 20-47 are pending in the application.

Claims 34, 41, and 42 were rejected under 35 U.S.C. §112, second paragraph, because the variable "x" is not defined. The claims have been amended to delete the variable "x."

Claims 1-19, 34, and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi. Independent claim 1 recites that the substrate includes "a first surface portion and a second surface portion adjacent the first surface portion" and that the first layer is applied on the first surface portion and the second layer is applied on the second surface portion.

Kobayashi does not disclose or suggest the features recited in claim 1. Kobayashi discloses a photocatalytic coating having multiple layers that are stacked on top of each other. The stacked arrangement does not include a first layer on a first surface portion of the substrate and a second layer on a second surface portion of the substrate that is adjacent to the first surface portion, as recited in independent claim 1. For this reason, the rejection should be withdrawn.

Additionally, the Examiner previously argued that since Applicant has not disclosed that having a first layer on a portion of a substrate and a second layer on a different portion of the substrate would enhance the process or is for any particular purpose, Kobayashi's multi-layers would perform equally well. Applicant respectfully disagrees because the claimed arrangement would directly expose both of the layers to contaminants passing over the substrate, whereas a layer on Kobayashi that is located below another layer in the stack would not be directly exposed to the passing contaminants. Thus, the claimed arrangement and the arrangement in Kobayashi would not necessarily perform equivalently as the Examiner argues. For this additional reason, the rejection should be withdrawn.

Claim 35 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi in view of Reisfeld. As explained above, independent claim 1 from which claim 35 depends includes limitations that are not found or suggested in Kobayashi. The Examiner relies on the teachings of Reisfeld for providing a honeycomb substrate. Reisfeld fails to disclose or suggest the limitations of claim 1 or motivation for modifying Kobayashi to include the limitations. Accordingly, claim 35 is allowable, and Applicant requests that the rejection be withdrawn.

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Additionally, Applicant respectfully disagrees that the Examiner has established motivation for *prima facie* obviousness to reject claim 35. Whether the substrates of Kobayashi and Reisfeld are equivalents as the Examiner contends does not alleviate the burden on the Examiner to provide motivation to modify the base reference. The rejection fails to state any motivation to modify the base reference, and should therefore be withdrawn.

Additionally, even if the substrate of Reisfeld is equivalent to the substrate of Kobayashi as the Examiner argues, there is no motivation to substitute one of the substrates for the other. Indeed, there would be no benefit to doing so since the Examiner thinks that they are equivalent. Accordingly, the rejection fails to establish *prima facie* obviousness and should be withdrawn.

Claims 7-12, 20, 33, 37, 38, 43, and 44 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi in view of Reisfeld. Regarding claims 7-12, these claims depend from independent claim 1 and, as explained above, include limitations that are not found or suggested by the cited references.

Likewise, claims 20, 37, and 38 recite that the first layer is on a first surface portion of the substrate and a second layer is on a second surface portion of the substrate that is adjacent the first surface portion, which is not found or suggested in the cited references.

Claims 33, 43, and 44 recite the steps of applying the first layer on a first surface portion of a substrate and applying a second layer on a second surface portion of the substrate that is adjacent the first surface portion, which is also not found or suggested in the cited references. For these reasons, the rejection should be withdrawn.

Claims 21-32 and 39-42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Reisfeld in view of Kobayashi. The Examiner argues that Reisfeld discloses a photocatalytic fluid purification system having two honeycomb photocatalytic filters 12, 14, 16 that are each coated with a suitable photocatalytic coating (paragraph 24). The Examiner further argues that Kobayashi discloses a plurality of photocatalytic compositions and that it would have been obvious to one of ordinary skill in the art to modify Reisfeld with the photocatalytic compositions as shown in Kobayashi because "this would result in enhancing the photocatalytic fluid purification."

Respectfully, the rejection fails to establish *prima facie* obviousness because there is no motivation for modifying Reisfeld to include the coatings having the particular compositions that are recited in independent claim 21. Reisfeld teaches (paragraph 24) "that any suitable catalytic coating 120 may be disposed on element 12, 14, or 16." Applicant notes that the term "coating"

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used in Reisfeld is singular, thereby indicating that the same type of coating would be applied on each of the substrates 12, 14, and 16. The rejection fails to provide any motivation for selecting and using the particular coating compositions recited in the claim. For these reasons, the rejection should be withdrawn.

Regarding claim 27, the Examiner argues that random and general selection of the order of the substrates would be equivalent to the claimed order because there are no unexpected results that occur from the claimed order. To the contrary, the order is significant because the downstream substrate and its coating composition would destroy at least some of the intermediate products formed from the upstream substrate and its coating composition (e.g., see specification paragraph 49 and generally the types of substances that the various coating compositions destroy as described throughout the specification). Therefore, the order of the substrates is significant and the rejection must provide motivation for selecting or using the order that is recited in the claim. For this reason, the rejection should be withdrawn.

Claims 1-44 were provisionally rejected on the grounds of non-statutory obviousness-type double patenting as being unpatentable over claims 1-34 of co-pending application 10/736,921. Since there are no allowed claims in either application, applicant cannot determine whether the obviousness-type double patenting is warranted and defers response until a later time.

Applicant believes that no additional fees are necessary, however, the Commissioner is authorized to charge Deposit Account No. 03-0835 in the name of Carrier Corporation for any additional fees or credit the account for any overpayment.

Respectfully submitted,

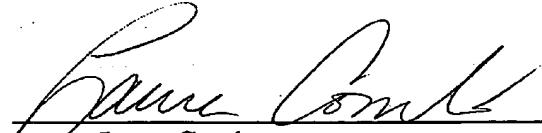

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I hereby certify that this correspondence is being facsimile transmitted to the United States patent and Trademark Office, fax number (571) 273-8300, on February 18, 2007.



Laura Combs